infection, MXN$123 million for pneumococcal diseases, MXN$199 million for HPV, and MXN$258 million for *B. pertussis*. Cost offsets in Year 1 after adoption of the immunization program totaled MXN$23 million for RSV infection, MXN$38 million for pneumococcal diseases, MXN$133 million for HPV, and MXN$206 million for *B. pertussis*. **CONCLUSIONS:** This model suggests that targeting RSV prophylaxis to high-risk populations can lead to substantial cost offsets, which are consistent with or improve on the budget impact of other preventive health programs for childhood diseases in Mexico.

PRS21

HEALTH CARE RESOURCE UTILIZATION AND REHOSPITALIZATION COSTS OF NEBULIZED ARFORMOTEROL FOR THE TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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OBJECTIVES: Arformoterol tartrate inhalation solution (arformoterol) is a long-acting beta$_2$-agonist indicated for long-term maintenance treatment of bronchoconstriction in patients with chronic obstructive pulmonary disease (COPD). Nebulized albuterol (albuterol) is a short acting beta-agonist indicated as rescue medication for acute COPD exacerbations, but often patients receive it in place of maintenance treatment. This analysis estimated total medical, pharmacy and rehospitalization costs for nebulized arformoterol compared with albuterol nebulized solution for the management of COPD in hospitalized patients. **METHODS:** An economic model was built comparing health care resource utilization and rehospitalization costs for arformoterol and albuterol from the hospital perspective. Pharmacy costs were calculated on a cost per hospital stay basis and were determined by the number of doses, frequency of administration, and hospital length of stay (LOS). Pharmacy costs were based on publically available wholesale acquisition costs. Medical costs included COPD exacerbation hospitalization costs, rehospitalization costs, and respiratory therapy costs. Cost of COPD-related inpatient hospitalizations were calculated as the cost per day times the mean LOS. Rehospitalization costs were calculated using rehospitalization rates at 30, 90, and 180 days. Respiratory therapy costs were based on the number of daily sessions for administration and the hourly rate of respiratory therapy. **RESULTS:** Mean LOS was 4.4 days for arformoterol vs. 5.2 days for albuterol. Arformoterol had lower rates of rehospitalization at 30, 90 and 180 days post-discharge, respectively (8.7% vs. 11.9%, 15.4% vs. 26.8% and 31.7% vs. 38.2%). Total medical and pharmacy costs per treated patient for arformoterol were $6,953 vs. $8,456 for albuterol, resulting in a savings of $1,503 per patient. Arformoterol yielded net savings of $338, $1,025, and $847 over albuterol in rehospitalization cost per treated patient at 30, 90 and 180 days, respectively. **CONCLUSIONS:** Total costs of arformoterol were less than albuterol nebulized solution due to lower hospitalization and rehospitalization costs.

PRS22

ECONOMIC BURDEN ASSOCIATED TO TOBACCO IN THE BRAZILIAN POPULATION

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OBJECTIVES: To estimate the economic burden of lost productivity and health care resource use associated to tobacco in the Brazilian population among smoking and non-smoking/ex-smoking employees. **METHODS:** A structured search was performed on MEDLINE database (via PubMed) using the MesH Database terms in accordance with the following terms ((“Costs and Cost Analysis” [Mesh]) AND (“Smoking” [Mesh]) AND (“ absenteeism” [Mesh]) AND (“presenteeism” [Mesh])), as well as the cost of absence days due to health events retrieved from national labor legislations; and average wage was retrieved from the Brazilian Institute for Geography and Statistics (IBGE) 2.013. **RESULTS:** The disease costs related to tobacco are Cardiovascular disease (CVD) BRL 27,845.32; stroke BRL 20,591.24; Chronic obstructive pulmonary disease (COPD) BRL 21,328.59; pneumonia BRL 1,111.82; lung cancer BRL 67,225.83; other cancers BRL 85,524.46. When comparing the productivity and absence days, the smokers lose 62.1% more days than nonsmokers and 41.34% than ex-smokers, which corresponds to BRL 1,326.62 in terms of annual monetary average cost. Additionally, it was found that the life expectancy of male smokers corresponds to 75.30 years; for females, it already was 79.77 years. That means a loss of 5.03 and 4.5 years, respectively, when compared to the expected useful lives of the the nonsmoking population. **CONCLUSIONS:** Therefore, smoking employees can cost, on unproductive days, almost 3 times more than non-smokers and 2 times more than ex-smokers, besides the cost related to the treatment of stroke, COPD and CVD, and others.

PRS23

ECONOMIC IMPACT OF ALBERTA’S PCV7 CHILDHOOD IMMUNIZATION PROGRAM (2003-2008)

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OBJECTIVES: Acute respiratory tract infections caused by *Streptococcus pneumoniae*(SP) are a leading cause of morbidity and mortality in young children and the elderly. In 2002, Alberta introduced a pneumococcal universal immunization program for children, using Prevnar 7 (PCV7). In this study, we assess the economic impact of PCV7 on the Alberta health care system. **METHODS:** Using active surveillance data from Alberta, we examine the net costs averted as a result of a decline in PCV7 serotypes, accounting for the increase in costs due to serotype replacement. We also calculate the magnitude of herd immunity in terms of costs averted. **RESULTS:** We find that following the introduction of PCV7 (2003-2008), the number of cases of invasive disease caused by vaccine serotypes declined significantly across all ages. Specifically, by 2008, there was considerable evidence of herd immunity as the incidence rates had declined nearly 100% across all ages. However, non-PCV7 cases, on the other hand, increased. Assuming serotype replacement is a result of the introduction of PCV7, net costs averted are in the range of $5 million as a result of the implementation of PCV7 universal vaccination in Alberta. Over the time period, direct protection resulted in net cost savings of $2.6 million, and indirect benefits $2.4 million; the indirect benefits derived by elderly populations were more than one third of the total benefits derived across the population. **CONCLUSIONS:** This study is unique in that it uses validated surveillance data from Alberta to retrospectively assess the economic benefit of a public health policy, and describes the distribution of benefits across different segments of the population. From 2003 to 2008, the cumulative cost impact of introducing PCV7 in the childhood immunization program to the Alberta health system is approximately $5 million, half of which were a result of herd immunity.

PRS24

COST COMPARISONS WHEN PATIENTS ARE CENSORED

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OBJECTIVES: In pharmaceutical comparative effectiveness studies, patients frequently discontinue drug treatments soon after initiation, potentially biasing estimated costs attributed to treatments. A partitioned data structure may facilitate estimating costs in the presence of censoring. We compared health care utilization costs for two chronic obstructive pulmonary disease (COPD) treatments over a one-year period using intent-to-treat (ITT) and as protocol (AP) approaches. **METHODS:** Claims data from two managed care health plans from July 2004 through September 2013 was used to compare annual health care costs for COPD patients treated with 1) inhaled corticosteroid (ICS)/long-acting beta-agonist (LABA) or long-acting muscarinic antagonist (LAMA) (non-triple) therapy, or 2) concurrent ICS/LABA+LAMA (triple) therapy. Post-treatment costs were aggregated by 4-week periods. Costs were estimated for ITT and AP treatment groups, using actual and weighted cost methods. Patients were censored for health plan disenrollment (possible after 6 months post-index). In the AP analysis, patients were additionally censored for discontinuation of treatment. Weights were the inverse probability of remaining uncensored. **RESULTS:** Study subjects numbered 5,475; 484 triple, 4,991 non-triple. Few patients disenrolled (n=139) by one-year post-index. ITT cost estimates were similar for actual and weighted cost methods. ITT actual mean total costs were significantly higher for triple therapy patients (P=0.01): $20,013 (standard deviation [SD], $12,865) for triple, and $18,468 (SD, $11,619) for non-triple. Censoring was heavy in the AP analysis. Probability for remaining uncensored during the 13th four-week period was 28.5% for triple patients and 22% for non-triple patients. AP actual mean total costs were considerably lower than ITT costs: $12,586 (SD, $9,991) for triple therapy, $8,688 (SD, $7,896) for ICS/LABA or LAMA. AP weighted mean total costs were $19,133 for triple therapy and $16,814 for non-triple. **CONCLUSIONS:** The weighted method allowed censored individuals to contribute cost information. AP analysis costs were lower than ITT costs, highlighting the impact of therapy discontinuation on analyses.

PRS25

HOSPITALIZATION COST OF INPATIENTS WITH COPD AND THEIR COMPLICATION STUDY IN CHINA

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OBJECTIVES: The prevalence of COPD is higher and increases every year in China. To estimate hospital inpatient costs, LOS and complication among patients with osteoporosis fractures in China. **METHODS:** Data were extracted by the discharge diagnosis of COPD from the China Health Insurance Research Association claim database which includes a nationwide, cross-sectional sampling of inpatients’ visits in 2011. Several complications were chosen from reference to our objective complication, the inpatients’ visits with these complication were chosen by their diagnosis and drug used because the records were not integrity. The descriptive analysis of LOS, total medical costs and other parameters were calculated. Continuous variables were examined by student’s t test for we showed all results with mean value and standard deviation. The statistical software was SPSS. **RESULTS:** The analysis included 8667 hospitalizations (Male: 62.71%, Age: 72.08±74 years). Overall LOS and costs were 16.17±25.70 days and 7949.59±11782.33 RMB. Sample of hospitalization with complication of heart failure was most (2503), followed by atrial fibrillation (AF), diabetes mellitus (DM), hypertension, osteoporosis, ischemic heart disease(IHD). While, patients with osteoporosis had the most hospitalization cost (17352.85±29584.08 RMB), followed by IHD (17140.08±25472.15 RMB), anxiety-depression (16399.81±22671.54 RMB), DM (13709.27±22288.66 RMB) and hypertension (13564.59±20725.80 RMB). For hospitalization cost, Men’s was more than women’s (8366.42 ±11034.93 vs. 7248.65 ±12913.71 RMB $p<0.05$), employee’s was more than residents’ (9126.86±13026.41 vs. 4887.81 ±6753.29 RMB $p<0.001$), inpatients’ (age over than 80) was the most (9697.75±12238.17, RMB $p<0.001$), east’s was the most(10853.62±14751.43 RMB $p<0.001$), prefecture-level city’s was the most(8039.55 ±14584.93 RMB $0.05<p<0.$ 1). **CONCLUSIONS:** Heart failure was a common complication among COPD patients, and osteoporosis increased the hospitalization cost for COPD patients which might be for the surgery. Hospitalization cost varied significantly among different patients and area, expect different level of city. The relationship between cost and complication should be studied further in future.

PRS26

SYSTEMATIC REVIEW OF ECONOMIC BURDEN IN SYMPTOMATIC CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) PATIENTS

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OBJECTIVES: To systematically assess the global economic burden associated with symptomatic COPD. **METHODS:** A systematic search of Embase®, MEDLINE®, EconLit® and LILACS® was conducted for last 10 years along with search of conference proceedings for last 3 years. Non-randomised trials and observational stud-